

PATENT COOPERATION TREATY PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)



Applicant's or agent's file reference 00000PCT7782	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/JP2005/005298	International filing date(day/month/year) 16.03.2005	(Earliest) Priority Date (day/month/year) 19.03.2004
Applicant SEMICONDUCTOR ENERGY LABORATORY CO., LTD.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☒ Unity of invention is lacking (See Box III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:



5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 1C

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.



Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

The "special technical feature" of claims 1-29 relates to "forming a second region by irradiating the substance with light to modify a part of the substance surface wherein the light has a wavelength which is absorbable by the light-absorbing material, and forming a pattern on the second region by discharging a compound including a pattern forming material". However, this feature is disclosed in a prior art document US 6399257 B1(CANON KABUSHIKI KAISHA), 2002.06.04, Column 3-7. So the feature cannot be a special technical feature.

And there exists no special technical feature linking the inventions of claims 1-29 as to form a single general inventive concept among the inventions.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1, 4

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/005298

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl.⁷ H01L 29/786, 29/423, 29/49, 21/288, 21/336 21/8234, 21/8238, 27/088, 27/092, G02F1/13, 1/1368, G09F9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.⁷ H01L 29/786, 29/423, 29/49, 21/288, 21/336 21/8234, 21/8238, 27/088, 27/092, G02F1/13, 1/1368, G09F9/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Published examined utility model applications of Japan 1922-1996
Published unexamined utility model applications of Japan 1971-2005
Registered utility model specifications of Japan 1996-2005
Published registered utility model applications of Japan 1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6399257 B1(CANON KABUSHIKI KAISHA),2002.06.04. Columns 3-7 & JP 2000-258622 A	1, 4

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

10.06.2005

Date of mailing of the international search report

28.6.2005

Name and mailing address of the ISA/JP

Japan Patent Office

3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan

Authorized officer

KAZUNARI TANADA

Telephone No. +81-3-3581-1101 Ext. 3498

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Continuation of: III

Furthermore, the "special technical feature" of claims 18-29 relates to "a thin film transistor comprising: a first conductive layer provided over a light-transmitting substrate; an insulating layer over the light-transmitting substrate and the first conductive layer; a substance including a light-absorbing material over the insulating layer; a second conductive layer selectively over the substance; and a semiconductor layer over the substance and the second conductive layer". However, this feature is disclosed in a prior art document JP 02-130961 A(CANON KABUSHIKI KAISHA), 1990.05.18, FIG 1(Family: none). So the feature cannot be a special technical feature.

And there exists no special technical feature linking the inventions of claims 18-29 as to form a single general inventive concept among the inventions.

Therefore there are no technical relationship which is considered as "special technical feature"(PCT rule 13.2) among the claims 1-29. So this application contains the following groups of invention which are not so linked as to form a single inventive concept under PCT rule 13.2.

- Group 1: Claims 1,4
- Group 2: Claim 2
- Group 3: Claim 3
- Group 4: Claim 5
- Group 5: Claim 6
- Group 6: Claim 7
- Group 7: Claim 8
- Group 8: Claim 9
- Group 9: Claim 10
- Group 10: Claims 11,13
- Group 11: Claim 12
- Group 12: Claim 14
- Group 13: Claim 15
- Group 14: Claim 16
- Group 15: Claim 17
- Group 16: Claims 18,20
- Group 17: Claim 19
- Group 18: Claim 21
- Group 19: Claims 22,24
- Group 20: Claim 23
- Group 21: Claim 25
- Group 22: Claims 26,28
- Group 23: Claim 27
- Group 24: Claim 29